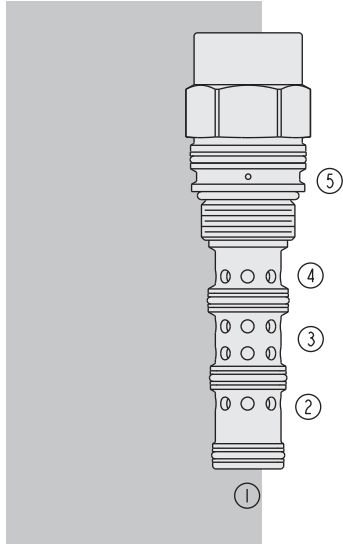


HPD16-S50 HyPerformance™ Piloted 3-Way Spool



DESCRIPTION

A high pressure, screw-in, cartridge-style, pilot-operated, spool-type, hydraulic directional valve.

OPERATION

When in neutral, the **HPD16-S50** allows flow between ports 3 and 2 bidirectionally while port 4 is blocked. On remote pilot signal at 1, the valve's spool shifts to block port 2 while opening flow between ports 3 and 4 bidirectionally. The spring chamber is vented to the tank through port 5. The vented spring chamber allows the valve to be fully pressurized at ports 1, 2, 3, and 4 without affecting required pilot pressure at port 5. Pressure at port 5 will increase the required pilot pressure at a 1:1 ratio.

FEATURES

- Hardened spool and cage for long life.
- All HyPerformance™ products are tested to the rigorous standards of the NFPA specification T2.6.1.
- All HyPerformance™ valves are tested at a verification level of 90% and an assurance of 99%.

RATINGS

Operating Pressure: 350 bar (5075 psi); 10% cycle life: 420 bar (6090 psi)

Note: All HyPerformance™ products are tested for 900K cycles at 350 bar and 100K at 420 bar.

Proof Pressure: 690 bar (10000 psi)

Burst Pressure: 1380 bar (20000 psi)

Flow Rating: Up to 151 lpm (40 gpm) with PPDI urethane seals. Up to 114 lpm (30 gpm) with sealed spool between ports 1 and 2 and restricted flow between ports 2 and 3 up to 57 lpm (15 gpm) maximum.

Maximum Internal Leakage: 350 bar (5075 psi) at 32 cSt.

HPD16-S50:

Ports 3-4: 246 ml/min. (15 cu.in./min.)

Ports 3-2: 410 ml/min. (25 cu.in./min.) Pilot Pressure 350 bar (5075 psi)

HPD16-S50N:

Ports 3-4: 328 ml/min. (20 cu.in./min.)

Ports 3-2: 492 ml/min. (30 cu.in./min.) Pilot Pressure 350 bar (5075 psi)

Operating Temperature: -54° to 107°C (-65° to 225°F) with PPDI urethane seals

Filtration: See page 9.010.1

Fluids: Mineral-based or synthetics with lubricating properties at viscosities of 7.4 to 420 cSt (50 to 2000 sus); See Temperature and Oil Viscosity, page 9.060.1

Installation: No restrictions; See page 9.020.1

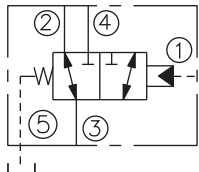
Cavity: HVC16-S5; See page 9.116.1

Cavity Tool: HCT16-S5XX; See page 8.600.1.

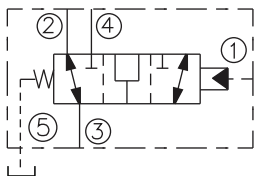
Seal Kit: HSK16-S5U-0000 (Urethane); See page 8.650.1.

SYMBOLS

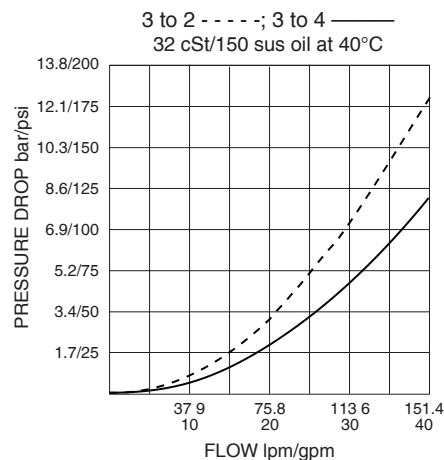
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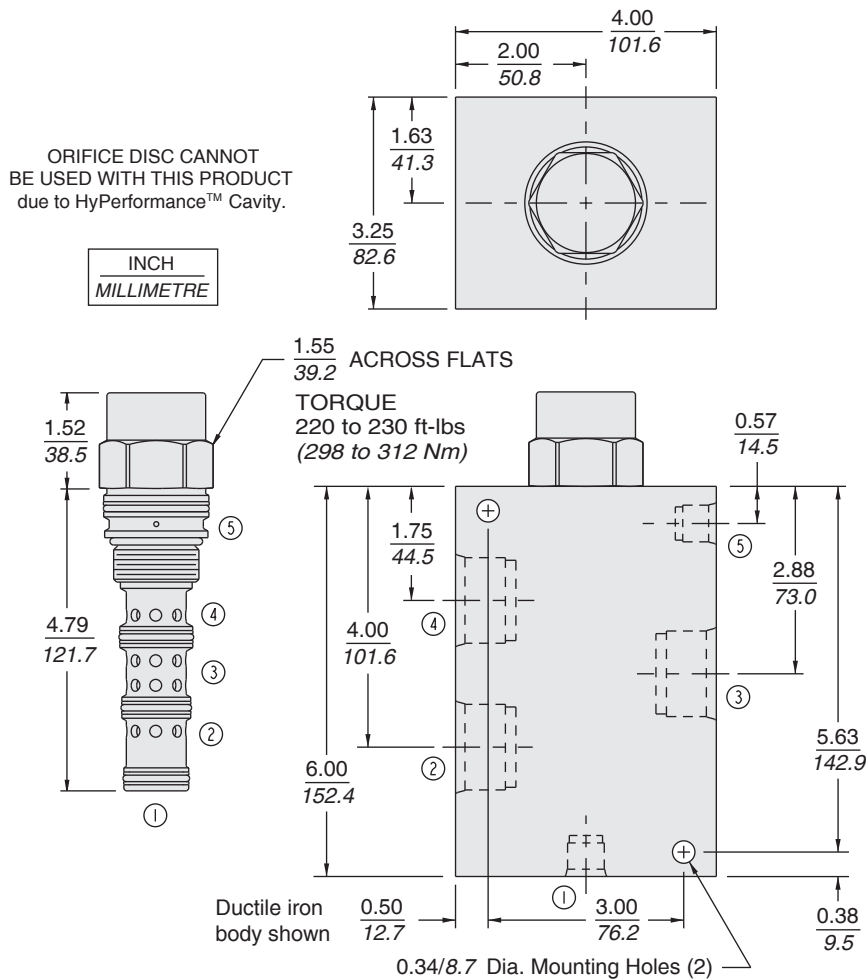
OPEN TRANSITION OPTION:



PERFORMANCE (Cartridge Only)



DIMENSIONS



MATERIALS

Cartridge: Weight: 0.8 kg. (1.75 lbs.)
Steel with hardened work surfaces.
Zinc-plated exposed surfaces.
PPDI Urethane seals and no back-up rings standard.

Ported Body: Weight: 8.09 kg (17.79 lbs) HyPerformance™
Ductile iron (code 'D') standard.
Rated to 345 bar (5000 psi).
See page 8.016.1.

TO ORDER

HPD16-S50		-	-	-
Option	Blank			Bias Spring
None	N			150 10.3 bar (150 psi)
Open Transition				Optional bias springs considered on OEM request.
	Porting			Seals
	Cartridge Only	0		U PPDI Urethane
	3/4" BSP	6BD		US Sealed spool between ports 1 and 2
	1" BSP	8BD		
	SAE12	12TD		
	SAE 16	16 TD		

Note: PPDI Urethane seals are recommended for pressures over 241 bar (3500 psi).
Note: Consult factory for additional seal options.